

## ABSTRAK

Siti Nusaebah Gotola (2022). Analisa Kadar Nitrat ( $\text{NO}_3^-$ ), Sulfat ( $\text{SO}_4^{2-}$ ), Fosfat ( $\text{PO}_4^{3-}$ ) Pada Sampel Air Danau Galela Menggunakan Metode Kromatografi Ion. Pembimbing Ahmad Muchsin Jayali, dan Muhammad Amin.

Penelitian ini bertujuan untuk mengetahui kadar  $\text{NO}_3^-$ ,  $\text{SO}_4^{2-}$  dan  $\text{PO}_4^{3-}$  Menggunakan metode Kromatografi Ion pada sampel air Danau Galela Halmahera Utara. Teknik analisis data dilakukan secara eksperimen menggunakan kromatografi ion untuk menentukan kadar ion  $\text{NO}_3^-$ ,  $\text{SO}_4^{2-}$  dan  $\text{PO}_4^{3-}$ . Hasil penelitian menunjukkan bahwa kadar  $\text{NO}_3^-$ ,  $\text{SO}_4^{2-}$  dan  $\text{PO}_4^{3-}$  di setiap titik sampling  $T_1$ ,  $T_2$ ,  $T_3$  dan  $T_4$  yaitu kadar  $\text{NO}_3^-$  dilaksi  $T_1$  dan  $T_4$  masing-masing 0,139 ppm dan 0,036 ppm.  $\text{SO}_4^{2-}$   $T_1$  sampai  $T_4$  berturut-turut yaitu 1,83 ppm; 1,75 ppm; 1,65 ppm; dan 1,66 ppm.  $\text{PO}_4^{3-}$  hanya ada di lokasi sampling  $T_1$  dengan konsentrasi sebesar 0,15 ppm. Intensitas serta volume kegiatan masyarakat di daerah sekitar Danau berupa perkebunan, peternakan, budidaya ikan sangat berpengaruh terhadap kandungan nitrat sulfat serta fosfat di Danau.

**Kata Kunci :** Kromatografi Ion. Kadar Ion di Danau, Danau Galela

## ABSTRACT

Siti Nusaebah Gotola (2022). An Analysis Levels of Nitrate ( $\text{NO}_3^-$ ), Sulfate ( $\text{SO}_4^{2-}$ ), Phosphate ( $\text{PO}_4^{3-}$ ) in Galela Lake Water Sample Using Ion Chromatography Method. Ahmad Muchsin Jayali as the first advisor and Muhammad Amin As the second advisor.

This study aims to know the levels of  $\text{NO}_3^-$ ,  $\text{SO}_4^{2-}$  and  $\text{PO}_4^{3-}$  in water samples of Galela Lake, North Halmahera. This research applied the qualitative Method. The instrument used ion chromatography. The samples were from Galela Lake North Halmahera. The findings show that there are the levels of  $\text{NO}_3^-$ ,  $\text{SO}_4^{2-}$  and  $\text{PO}_4^{3-}$  at each sampling point. The research obtained  $\text{NO}_3^-$  levels at  $T_1$  and  $T_4$  respectively 0.139 and 0.036 ppm. The data contain  $\text{SO}_4^{2-}$  at  $T_1$  to  $T_4$  were 1.83 ppm, respectively; 1.75 ppm; 1.65 ppm; and 1.66 ppm.  $\text{PO}_4^{3-}$  only existed at the  $T_1$  sampling location concentration of 0.15 ppm. The intensity and volume of community activities in the area around the lake in the form of plantations, animal husbandry, fish farming greatly affect the nitrate, sulfate and phosphate content in the lake.

**Keywords:** Ion Chromatography. Ion Levels in Lake, Lake Galela